

APPLICATION NO 09866576

August 24, 2004

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CLMPTO

1. (Currently Amended) A semiconductor device comprising:
a Si crystal having a (111) surface; and
an insulation film formed on said (111) surface of said Si crystal,
wherein at least a part of said insulation film comprises a Si oxide film containing Kr,
said Si oxide film being substantially free from crystal defects, and said Si oxide film
having a surface state density of $10^{11} \text{ eV}^{-1} \text{ cm}^{-2}$ or less.
2. (Cancelled).
3. (Previously Presented) A semiconductor device comprising:
a Si crystal having a (111) surface; and
an insulation film formed on said (111) surface of said Si crystal,
wherein at least a part of said insulation film comprises a Si oxide film containing Kr,
and a Kr concentration level decreases in said Si oxide film from a surface of said Si oxide
film to an interface between said Si oxide film and said Si crystal.
4. (Previously Presented) A semiconductor device as claimed in claim 1,
wherein said Si oxide film contains Kr with a surface density of $5 \times 10^{11} \text{ cm}^{-2}$ or less at
a surface thereof.
5. (Original) A semiconductor device as claimed in claim 1, further having a gate
electrode on said Si oxide film.
6. (Original) A semiconductor device as claimed in claim 1,
wherein said crystal surface is formed on a part of a device isolation groove formed
on a Si substrate.
7. (Previously Presented) A Semiconductor device as claimed in claim 1,
wherein said crystal surface forms a principal surface of said Si crystal.
8. (Original) A semiconductor device as claimed in claim 1,
wherein said crystal surface is formed on a surface of a polysilicon film.

CLAIMS 9-40 (CANCELLED)

41. (Currently Amended) A semiconductor device as claimed in claim 40, wherein said Si oxide film has a surface state density of $10^{11} \text{eV}^{-1} \text{cm}^{-2}$ $10^{11} \text{eV}^{-1} \text{cm}^{-2}$ or less.

42. (Previously Presented) A semiconductor device as claimed in claim 40, wherein a Kr concentration level decreases in said Si oxide film from a surface of said Si oxide film to an interface between said Si oxide film and said Si crystal.

43. (Previously Presented) A semiconductor device as claimed in claim 40, wherein said Si oxide film contains Kr with a surface density of $5 \times 10^{11} \text{cm}^{-2}$ or less at a surface thereof.

44. (Previously Presented) A semiconductor device as claimed in claim 40, further comprising a gate electrode on said Si oxide film.

45. (Previously Presented) A semiconductor device as claimed in claim 40, wherein said (111) surface of said Si crystal is formed on a part of a device isolation groove formed on said Si crystal.

46. (Previously Presented) A semiconductor device as claimed in claim 40, wherein said (111) surface of said Si crystal forms a principal surface of said Si crystal.

47. (Previously Presented) A semiconductor device as claimed in claim 40, wherein said (111) surface of said Si crystal is formed on a surface of a polysilicon film.